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ON THE TRANSPLANTATION OF SKIN *EN*  
*MASSE* IN THE TREATMENT OF ECTRO-  
PION AND OTHER DEFORMITIES.

BY CHARLES BELL TAYLOR, M.D., F.R.C.S.E.,

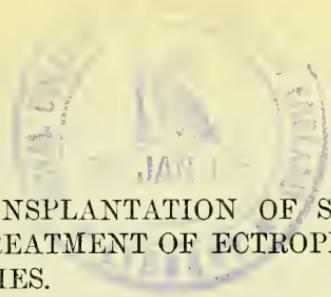
*Surgeon to the Nottingham and Midland Eye Infirmary.*







SKIN GRAFTING.—DR. BELL TAYLOR.  
No. 1.—Before operation.



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THE transplantation of skin from one part of the body to another, and from one person to another, without pedicle, is a subject of so much importance that I cannot doubt that a brief record of cases in which this operation has been performed by myself will be acceptable to the readers of *The Practitioner*. Although this method of treating deformities has not attracted much attention until recently, it was practised in 1818 by C. F. Graefe, who transplanted a piece of skin the size of a fourpenny-piece; and Mr. Lawson, the well-known ophthalmic surgeon, succeeded in 1870 in establishing a graft the size of a shilling; in the same year Leon Lefort, one of the surgeons to the Hotel Dieu, demonstrated that it was possible to transplant pieces of cuticle without pedicle, and the subject has since been so exhaustively treated by Dr. Wolfe, of Glasgow, that the operation is now very generally associated with his name. Both Lefort and Wolfe insisted upon the absolute necessity of scraping the under surface of the flap until every shred of subcutaneous tissue was removed, and Abadie and others who have practised the operation insist upon the necessity of a like precaution. My own experience, which is not in accord with the above-named authorities, dates from March 1875, when I was induced to replace a large piece of skin that I had removed from the upper eyelid of a lady, in order to remedy a very marked degree of ptosis. So much skin

had been removed that the eye would not close, and I determined to replace it. No precautions whatever were taken, and although the flap had been separated from the body for nearly half an hour, and was apparently quite dead, the wound healed like a cut finger. So remarkable a success made a great impression on my mind, and being unaware at the time of what had been done in this direction by Lefort and others, I came to the conclusion that I had stumbled upon a discovery of some importance, and accordingly brought the case in question, together with a child in whom I had replaced the eyelid by a flap taken from the arm, under the notice of the members of the British Medical Association at the annual meeting when held in Leicester in 1877. The accompanying photograph exhibits a very similar case to the one then presented to the notice of the meeting. It is, as is evident at a glance, a bad case of deformity, the result of ectropion, caused by extensive exfoliation of diseased bone in a delicate and scrofulous subject.

This child, who came from a distance, had been seen by other surgeons, and some attempt had been made to remedy the deformity; but the small portion of the upper lid, which had escaped destruction, was so firmly embedded in the diseased tissue that it was evident that nothing but a most careful operation with transplantation of new skin, necessarily from a distant region, would suffice, while it was clear that, unless something was done, the eye, constantly open, congested, and perpetually exposed to external irritation, would be seriously damaged. It was impossible to preserve a pedicle while transplanting from a distant region, as the patient was exceptionally timid and irritable. I therefore decided to transplant *en masse*, and selected for the purpose a piece of delicate skin from the inside of the arm. The upper lid, as may be noticed in the photograph, was turned completely inside out, and I took advantage of this position to make a raw surface well within the lashes; a similar raw surface was established on the opposing edge of the lower lid; what remained of the eyelid cut free from its deep-seated attachments, and the two raw surfaces brought together and firmly attached by sutures deeply placed in the lids. The upper



SKIN GRAFTING. — DR. BELL TAYLOR.  
No. 2.—After transplantation of skin.



portion of skin, which was buried under the orbital ridge, was then carefully dissected out, and the raw surface between the two covered with the flap borrowed from the arm. The triangular indentation immediately over the brow was filled up with another piece of skin, and the part saturated with a solution of boracic acid in cotton wool, which was maintained *in situ* by a compress bandage. The lids adhered, thus establishing a permanent anchyloblepharon, and, with but a slight threatening of sloughing at the edge, the transplanted skin became firmly attached in its new situation. I maintained the anchyloblepharon for six months, when, finding that the lid was firmly embedded in its new situation, I divided the attachments between the lids, and dismissed the case with the result depicted in the second photograph.

I may here remark that in establishing an artificial anchyloblepharon in order to treat ectropion, transplant tissue, or for any other purpose, it is most important to maintain the eyelashes intact, and, in order to do so, to make the raw surfaces well within the edges of the eyelids, and to maintain apposition by sutures deeply placed. An examination of the second photograph shows that this end has been fully attained in the case in question.

In the preceding three cases no preparation of the skin to be transplanted, such as scraping the under surface as recommended by Lefort and Wolfe, was adopted; the skin was simply replaced just as it was removed, with the fine reticulated vascular under surface untouched. In the next two cases I adopted the precautions recommended by these gentlemen, and both sloughed in spite of every care. In my sixth case I therefore replaced the cuticle simply as in my first cases, and although the lid (the lower lid), the subject of the operation, was constantly bathed in pus from a suppurating eyeball, the wound healed like a simple incision, and never gave the slightest trouble from first to last.

I have had other cases since I read a paper on this subject at the Jubilee meeting of the British Medical Association in August last, and am inclined to modify the opinion I then expressed so far as to say that I am disposed to think that, if no peeling of

the under surface of the flap is adopted, the percentage of cases of successful transplantation would be greater than I then thought possible. I would also remark that the fine silky tissue of the upper lid, which may always be spared, is best adapted for this purpose, and that I have successfully transplanted it on to the lower surface of the eyeball itself, for the cure of symblepharon, both with and without pedicle.